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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,393	02/18/2004	Tuan Nguyenquang	3LT-106	4347
30869	7590	05/11/2006	EXAMINER	
LUMEN INTELLECTUAL PROPERTY SERVICES, INC. 2345 YALE STREET, 2ND FLOOR PALO ALTO, CA 94306			PENG, KUO LIANG	
			ART UNIT	PAPER NUMBER

1712

DATE MAILED: 05/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/782,393	Applicant(s) NGUYENQUANG ET AL.	
	Examiner Kuo-Liang Peng	Art Unit 1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 7/9/04 IDS.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/9/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In Claim 8 (last line), it is not clear as to what “a commercial off-the-shelf catalyst” refers to.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 1, 3, 5, 7 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eklund (US 6 180 726) as evidenced by Atkins (US 4 732 962) and in view of Foscante (US 4 250 074).

For Claims 1-3, 5 and 7-12, Eklund discloses a **high temperature resistant** coating composition comprising A) to C). (col. 4, lines 45-64) Component A) can be a **hydroxy functional polysiloxane** with a hydroxy functionality up to about 10 wt%. (col. 5, lines 30-36) The amount (phr) of the polysiloxane is described in col. 5, lines 38-62. Component B) can be an **epoxy resin** (col. 5, line 63 to col. 7, line 45), and be present in an amount (phr) described in col. 7, lines 46-64. Eklund further teaches the use of pigments such as **titanium oxide**, **iron oxide** and fillers such as **aluminum**. (col. 8, lines 55-63 and col. 9, line 34) The amounts (phr) of the fillers and the pigments are described in col. 9, lines 46-53. Component C) can be dianhydrides, trianhydrides, tetraanhydrides, etc. in an amount (phr) as described in col. 8, lines 1-24. An imidazole can be present as a hardening catalyst. (col. 8, line 38). The dianhydrides, etc. should inherently function as **curing agents** for the epoxy resin in the presence of the imidazole as taught by Atkins. (col. 2, line 53 to col. 3, line 5) Eklund is silent on the specific use of the micaceous iron oxide and aluminum flake. However, Foscante teaches the incorporation of **micaceous iron oxide and aluminum flake to a high temperature resistant**

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coating composition comprising a polysiloxane and an epoxy resin. The motivation is to impart to the composition the resistance to high temperatures. (col. 1, lines 43-55 and col. 7, lines 58-65) In light of the benefit mentioned, it would have been obvious to one of ordinary skilled in the art at the time of the invention was made to add the aluminum flake and micaceous iron oxide into Eklund's composition. In addition, Eklund is silent on the specific amounts of the aluminum flake, titanium oxide and micaceous iron oxide set forth in the present invention. However, Eklund teaches that the amounts of these additives depend on the desired properties of the composition. (col. 9, lines 45-53) In other words, the amounts of these additives are Result-Effective variables. Therefore, it would have been obvious to one of ordinary skilled in the art at the time of the invention was made to incorporate these additives in whatever amounts through routine experimentation in order to obtain a composition with desired properties. Especially, Applicants do not show the criticality of these amounts. See MPEP 2144.05 (II). Since Eklund in view of Foscante's composition is substantially the same as that of Applicants', both should have the same properties including chemical resistance and high temperature resistance. For Claim 2, as mentioned above, the hydroxy functional polysiloxane can contain hydroxy functionality in an amount of up to about 10% wt, it should possess the hydroxy groups in the chain.

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Eklund is silent on the specific amount of hydroxy group in the chain. However, the amount of the hydroxy groups in the chain will affect the crosslinking density of the cured polysiloxane and the hardness of the cured composition. In other words, the amount of the hydroxy groups in the chain is a Result-Effective variable. Therefore, it would have been obvious to one of ordinary skilled in the art at the time of the invention was made to utilize a polysiloxane having whatever amount of hydroxy groups in the chain through routine experimentation in order to obtain a cured composition with desired crosslinking density. Especially, Applicants do not show the criticality of the amount of hydroxy groups in the chain. See MPEP 2144.05 (II). For Claim 8, Eklund further teaches the use of stannous octoate, etc. (col. 9, lines 11-29) For Claim 9, a flow agent (thioxotropic agent), a surface regulating agent (leveling agent), a wetting agent can be present. (col. 8, lines 30-53)

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eklund in view of Foscante as applied to Claims 1, 3, 5, 7 and 10-12 above, and further in view of Millar (US 2 768 149).

Eklund teaches the use of titanium dioxide, *supra*. Eklund is silent on the specific use of rutile titanium dioxides or anatase titanium dioxides. However,

Millar teaches the use of rutile titanium dioxides or anatase titanium dioxides in a **polysiloxane coating composition**. The motivation is to afford a **heat-stable** coating composition. (col. 2, lines 1-6 and col. 34-43) In light of the benefit mentioned, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize Millar's rutile titanium dioxides or anatase titanium dioxides in Eklund's high temperature resistant **polysiloxane coating composition**.

6. Claims 1-5 and 7-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mowrer (US 6 013 752).

For Claims 1, 3-5, 8 and 12, Mowrer discloses a **heat resistant** composition comprising a) to d). (col. 3, lines 6-15) Component b) can be a **hydroxy or alkoxy functional polysiloxane** represented by the formula described in col. 5, lines 6-33, where R^{10} or R^{11} can be a hydroxy group or an alkoxy group. The amount of component b) is described in col. 5, lines 44-55. Component c) can be an **epoxy resin** (col. 8, lines 20-47) and be present in an amount described in col. 8, lines 58-67. An **amine curing agent** can be used (col. 10, lines 13-35) in an amount described in col. 10, lines 62-67. The composition can include a **catalyst**, such as tin octate, etc. (col. 11, lines 4-14) Mowrer further teaches the use of

fillers/pigments such as **micaceous iron oxide, titanium dioxide, aluminum flake**, etc. (col. 12, lines 13-39) Mowrer is silent on the specific amounts of the fillers/pigments set forth in the present invention. However, the amounts of the fillers/pigments can affect the heat resistance and/or color of the composition as indicated in col. 12, lines 13-39. In other words, the amounts of the fillers/pigments are Result-Variables. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate the fillers/pigments in whatever amounts through routine experimentation in order to obtain a composition with desired heat resistance or color. Especially, Applicants do not show the criticality of these amounts. See MPEP 2144.05 (II). Since Mowrer's composition is substantially the same as that of Applicants', both should have the same properties including chemical resistance and high temperature resistance. For Claim 2, component b) can be a hydroxy or alkoxy functional polysiloxane represented by the formula described in col. 5, lines 6-33, where R^{10} or R^{11} can be a hydroxy group or an alkoxy group. As such, the polysiloxane can contain hydroxy groups or alkoxy groups in the chain. Mowrer is silent on the specific amount of the hydroxy groups or alkoxy groups in the chain. However, the amount of the hydroxy groups or alkoxy groups in the chain will affect the crosslinking density of the cured polysiloxane and the hardness of the cured

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composition. In other words, the amount of the hydroxy groups or alkoxy groups in the chain is a Result-Effective variable. Therefore, it would have been obvious to one of ordinary skilled in the art at the time of the invention was made to utilize a polysiloxane having whatever amount of hydroxy groups or alkoxy groups in the chain through routine experimentation in order to obtain a cured composition with desired crosslinking density. Especially, Applicants do not show the criticality of the amount of hydroxy groups or alkoxy groups in the chain. See MPEP 2144.05 (II). For Claim 7, mica and glass flake can be present. (col. 12, lines 13-30) For Claim 9, additives such as flow control additives, wetting agents, thioxotropic agents, etc. can be used. (col. 12, lines 40-49) For Claims 10-11, organic solvents such as toluene, xylene, etc. can be used. (col. 11, line 62 to col. 12, line 12)

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mowrer as applied to Claims 1-5 and 7-12 above, and further in view of Millar (US 2 768 149).

Mowrer teaches the use of titanium dioxide, *supra*. Mowrer is silent on the specific use of rutile titanium dioxides or anatase titanium dioxides. However, Millar teaches the use of rutile titanium dioxides or anatase titanium dioxides in a **polysiloxane composition**. The motivation is to afford a **heat-stable** coating

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composition. (col. 2, lines 1-6 and col. 34-43) In light of the benefit mentioned, it would have been obvious to one of ordinary skilled in the art at the time of the invention was made to utilize Millar's rutile titanium dioxides or anatase titanium dioxides in Mowrer's high temperature resistant **polysiloxane composition**.

8. The references K, M and N cited in the information disclosure statement filed on July 9, 2004 are lined through because Applicants do not provide hard copies thereof.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuo-Liang Peng whose telephone number is (571) 272-1091. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski, can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR

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[direct.uspto.gov](http://pair-direct.uspto.gov). Should you have questions on access to the Private PAIR system,

contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

klp

May 8, 2006



Kuo-Liang Peng
Primary Examiner
Art Unit 1712